

IN THE CLAIMS

Claim 1. (Currently Amended) A method of ~~monitoring~~ facilitating transmission of medical images on a data communications network ~~as the medical images are transported within the data communication network~~, the method comprising the steps of:

receiving requests, by a medical image transport service from a client application, for transmission of medical images from data sources to data targets on the data communications network, the data sources including at least modalities, storage resources, and processing resources connected to the data communications network, the data targets including at least storage resources, processing resources, and viewing terminals connected to the data communications network, the client application providing a user interface to the medical image transport service through which users are able to submit the requests to the medical image transport service for transmission of the medical images from the data sources to the data targets;

monitoring, by the medical image transport service, a—medical image network transactions between the ~~a~~ data sources and ~~a~~ data targets on the data communication network by a medical image transport service deployed on the electronic data communication network, said data communication network including a plurality of network elements interconnected by communication links and configured to pass protocol data units between each other by utilizing the communication links, said medical image network transactions relating to the delivery of the medical images over a dynamically determined route on the data communication network as the medical images are transported by exchanging protocol data units between the network elements over the communication links as the medical images are transferred between the data source and data target within the data communication network; and

notifying the client application ~~an entity associated with a transaction request which caused the medical image network transaction to be initiated~~ as to the status of the medical image network transaction within the communication network, or of an estimated time of delivery of the medical image to the data target, if the medical image network transaction is delayed by one or more network elements of the communication network.

Claims 2-4. (Canceled)

Claim 5. (Currently Amended) The method of claim 1, wherein the step of notifying comprises notifying the client application entity of a change in scheduled time for delivery of the medical image.

Claim 6. (Currently Amended) The method of claim 1, wherein the step of notifying comprises notifying the client application entity of a delay in scheduled delivery of the medical image.

Claim 7. (Currently Amended) The method of claim 6, wherein the step of notifying comprises notifying the client application entity of the reason for the delay, the source of the delay, the location of the delay, and if other images can still be retrieved.

Claim 8. (Currently Amended) The method of claim 6, wherein the step of notifying comprises notifying the client application entity of a likely resolutions to the delay.

Claim 9. (Original) The method of claim 1, wherein the network is a first network, and wherein the step of notifying comprises sending a notification on a second network.

Claim 10. (Original) The method of claim 9, wherein the second network is separate from the first network, and wherein the notification is a data message generated on the second network.

Claim 11. (Original) The method of claim 10, wherein the data message is at least one of an e-mail, a pager message, and a voice message.

Claim 12. (Currently Amended) A non-transitory computer readable medium incorporated in a network element and containing data and instructions which, when loaded into a processor of the network element, cause the network element to implement a medical image transport service deployed on a communication network to facilitate ~~monitor~~ transmission of medical images on the data communication network ~~as the medical images are transported within the data communication network~~, the medical image transport service comprising:

a data management service configured to receive requests from a client application for transmission of medical images from data sources to data targets on the data communications

network, the data sources including at least modalities, storage resources, and processing resources connected to the data communications network, the data targets including at least storage resources, processing resources, and viewing terminals connected to the data communications network, the client application providing a user interface to the medical image transport service through which users are able to submit the requests to the medical image transport service for transmission of the medical images from the data sources to the data targets;

the data management service being further configured to monitor the transmission of medical images over a dynamically determined route on the data communication network as the medical images are transported within the data communication network to determine how the medical images are being handled by network elements forming the data communication network to estimate when the medical images will be delivered by the data communication network and to detect sources of delay in transmission of the medical images within the data communication network that may affect delivery of the medical images by the data communication network; and

a client interface configured to provide notifications to a client related to the status of the transmissions of medical images on the network if the medical images are delayed on the network or of an estimated time of delivery of the medical images

wherein the data communication network includes a plurality of network elements interconnected by communication links and configured to pass protocol data units between each other by utilizing the communication links, and wherein the transmissions of medical images on the communication network that are monitored by the data management service are implemented using the protocol data units.

Claim 13. (Currently Amended) The computer readable medium of claim 12, wherein the medical image transport service further comprises a network resource manager configured to interface network devices in the network to reserve resources for the requests for transmission of medical images on the communication network and resolve delays in the network attendant to transmission of medical images on the network.